

REMARKS

With reference to numbered paragraph 1 of the Office Action, the drawings are objected to for failing to show every feature specified in the claims. While Applicant agrees that the elements of the claims must be shown in the drawings, Applicant takes issue with the notion that the exact terminology used in the claims must also be present in the drawings. For example, the flashing LED 1104 shown in FIG. 11 can serve as a find-in-the-dark indicator, a power source (e.g., battery) level indicator or a combination of the two as discussed in the last paragraph on page 13 and the first paragraph on page 14 of the application. Similarly, the load 105 shown in many of the drawing figures can generically represent any of a number of electrical devices, such as a light source, a radio, an electric motor and, for that matter, any other type of energy consuming load. Accordingly, Applicant respectfully submits that the various elements of the claims are sufficiently shown in the drawings and that the drawing objection in this regard is traversed.

To address the objection regarding margins and crowding, a substitute set of drawings is attached which include correct margins and additional pages to reduce crowding.

Finally, the reference to a “transfer circuit” in the claims has been dropped to overcome the specific objection to the drawings with respect to the transfer circuit. It should be noted, however, that several of the drawing figures show the connection of the power source to the load. For the record, this is what was meant by the transfer circuit, i.e. the circuit that transfers the energy from the power source to the load.

As required in numbered paragraph 2 of the Office Action, an Abstract of the Disclosure is also attached hereto.

Claims 51-72 stand objected to because the language “not forming a serial link in a transfer circuit between the power source and the load” is unclear as to the location of the transfer circuit. To address this issue, reference to “a transfer circuit” has been deleted in claims 51, 58 and 61 and replaced with language specifying that the “first input does not form a serial link between the power source and the load.”

In addition, claims 65, 70 and 71 are objected to for use of the language in claim 65, “said microchip also perform some functions related to the charging of said power source.” To address this objection, the language has been changed to “said microchip controls charging of said power source.”

Applicant acknowledges and appreciates the indication in the Office Action that claims 68, 69 and 72 contain allowable subject matter. Accordingly, claim 63 has been rewritten to incorporate the limitations of claims 66-68 and claim 72 has been rewritten to incorporate the limitations of original claim 63. In addition, new claims 73-79 have been added, which are dependent directly or indirectly on claim 72 and recite the features recited in the numerous other claims.

Claim 80 and dependent claims 81-86 represent a new claim set. Claim 80 is directed to a load in general but the claim is distinguished from claims 51, 58 and 61 in that the power source level indicator is specified as being a “light emitting” indicator.

Turning now to the art rejections set forth in the Office Action, claims 51, 52, 54-67, 70 and 71 stand rejected under 35 U.S.C. 103 as being unpatentable over U.S. Patent 5,645,341 to Liao in view of U.S. Patent Nos. 4,611,264 to Bradley and 4,497,881 to Bertolino. In addition, claim 53 stands rejected over the foregoing combination of references and further in view of U.S.

Patent No. 5,942,770 to Ishinaga et al. Applicant respectfully submits that these rejections are traversed in view of the following reasons.

Liao describes a lamp in the form of a wall fitting with a first bulb which is powered by a main supply and a flashlight which is detachably engaged with the wall fitting and which includes a second bulb powered by a rechargeable battery. The flashlight, clearly, is a flashlight only. The wall fitting simply provides a means whereby the battery in the flashlight can be recharged. The flashlight does not include any intelligence because the microprocessor 35 is associated with the wall fitting.

The wall fitting, although containing a microprocessor, does not conform to the limitations of the current independent claims. More particularly, in order to restrict the broad connotation that is associated with the word "system," the independent claims have been amended by the inclusion of the word "portable." The wall fitting in Liao is not portable and does not operate off an exhaustible power source. The current claims are all directed to a portable system which is powered by means of an exhaustible power source and this clearly excludes a system which works off mains power. Note in this regard that at column 3 lines 46 to 49 Liao states that it is the "wall lamp" that performs the timing and cut-off functions. The wall lamp is not portable and is powered by a mains supply.

With respect to Bradley, the device disclosed therein does not include any electronics, does not have an input to a microchip indicating that a load is being activated or deactivated and does not embody electronic control of an indicator. At column 2 lines 33 and 34, Bradley states "light will be emitted from the lens 12 at all times when the battery contains a charge."

In order to distinguish the independent claims further from Bradley, the find-in-the-dark indicator is specified as being “flashing.” The flashing capability can be achieved through electronic means (absent from Bradley) and offers the benefit of saving energy supplied by the exhaustible power source.

Bertolino describes an electric storage cell that produces a color change, due to chemical action, as the charge of the battery changes. A translucent holder and a chart are used in order to judge the color of the compound and estimate the battery charge. Bertolino does not disclose the use of any electronics. There is also no suggestion in Bertolino as to how the power level indication can be presented visibly on the outside of a product such as a flashlight or electric toothbrush. The colors exhibited by the Bertolino device are not light emitting and therefore cannot be seen in the dark. Thus the technique shown in Bertolino cannot be used to provide a find-in-the-dark indicator. In addition, newly presented independent claim 80 restricts the power source level indicator to a “light emitting” power source level indicator, which further distinguishes the claim from Bertolino.

Applicant points out that even if the portable part of Liao, working from an exhaustible power source, were to be combined with Bradley and Bertolino, and this can only be done with the benefit of hindsight, the combination would still lack the following elements in the independent claims:

- an electronic circuit;
- a microchip,
- an input to indicate an activated or deactivated load,
- an electronically controlled find-in-the-dark indicator,

an electronically controlled power source level indicator, and
a power source level indicator.

Thus, the combination of these 3 references, even if proper, does not establish a prima facie case of obviousness under 35 U.S.C. 103 as to any of the currently pending independent claims. Applicant therefore respectfully submits that all of the independent claims are allowable and hence the claims dependent thereon are also allowable. In addition, the dependent claims recite numerous features that further define the invention over the prior art as discussed below.

With respect to claim 52, it is noted that the Examiner has referred to Bradley as teaching “the feature of the indicating light changing activation sequence to indicate a change in operating mode for the purpose of indicating clearly when the battery needs to be recharged.” In fact, in Bradley the light is simply deactivated permanently, or de-energized, when the battery is discharged and remains so until the battery is recharged. In claim 52 on the other hand the wording “activating sequence” clearly means that the indicator will still be activated and will be able to indicate a change in operating mode by exhibiting a different activity (flashing) sequence. This is not the same as ceasing to function because the battery is discharged. To bring out the distinction out more clearly, “activating” in claim 52 has been changed to “activation/deactivation”.

Regarding claim 53, the Examiner’s reliance on Ishinaga et al is questioned. Ishinaga discloses a two color LED chip component and a method of manufacture thereof. This has no direct relevance to the invention as claimed. In particular, there is no disclosure or suggestion in Ishinaga of combining two indicating functions in a single indicator. Further, Bradley and Bertolino cannot be used to provide an indicator that combines the function of power source

level indication and find-in-the-dark indication. The chemical compound in Bertolino does not translate into an electrical signal that is needed to select the LED color and does not emit light so as to function as a combined find-in-the-dark/power source level indicator mechanism. The same holds true even if use is made of a two or three color LED. There is no indication in any of the citations of how to overcome the gap from Bradley and Bertolino to the present invention to provide an electronically controlled indicator which simultaneously provides a find-in-the-dark indication and a power source level indication.

The Examiner says with regards to claims 52 and 59 that Bradley also teaches the feature of changing an activation sequence to indicate a change in the operating mode. As has been pointed out this is the case when the light is on and there is charge in the battery. But this is the situation with any prior art flashlight: namely the bulb will stop burning when the battery is depleted. This is not the same as changing an activation sequence due to a change in operating mode while the battery is still functioning.

With regard to claims 54, 55, 57, 60 and 62, the Examiner states that Liao teaches an automatic delayed shut-off function. Liao in fact is simply a combination of two elements: a wall unit and a flashlight which is detachably engaged with the wall unit. The flashlight is for all practical purposes the same as a prior art flashlight which does not include electronics, a find-in-the-dark indicator nor a power source level indicator and, as noted, it has an exhaustible power source when it is removed from the wall fitting. The wall fitting is connected to a mains supply and is fixed to the wall i.e. for all practical purposes is not portable. At column 1 lines 27 to 31 it is stated that the flashlight saves electrical energy by turning off the emergency wall lamp when the flashlight is not removed from the wall i.e. when the flashlight is not in a portable mode and

is not powered by an exhaustible power source. When the flashlight is removed it has no electronics to control its operation. Moreover from the drawings it is clear that there is no suggestion that the flashlight can be turned off automatically. The activating/deactivating user interface shown in Bradley is an electromechanically switch (25) that forms a serial link between the power source and the load. Finally, contrary to the Examiner's statement, the auto shut-off function in Liao is not in response to an activation signal by a user (activating/deactivating user interface) but rather in response to the failure of the mains supply i.e. a change in the charging state of the unit (see column 3 lines 33 to 35).

In view of the foregoing, Applicant respectfully submits that the pending claims are patentable over the references of record and that the application is now in condition for allowance. Accordingly, reconsideration and allowance of the application are requested

Respectfully submitted,

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